Abstract

The rise of social media platforms, particularly Twitter, has transformed how individuals express opinions and concerns. Companies, like Spotify, leverage platforms such as Twitter for customer support and feedback gathering. This research delves into the world of Spotify Cares tweets using K-Means and K-Medoids clustering methods, aiming to enhance customer support analysis. The study employs the silhouette coefficient and the Davies-Bouldin Index (DBI) to evaluate clustering quality. With an extensive dataset covering more than 3 million Twitter customer service interactions, including 29,479 notes specific to Spotify Cares, this investigation uncovered latent patterns and themes. The versatility of K-Means and K-Medoids, proven effective in a wide range of applications, is highlighted. Therefore, K-means and K-medoids were implemented in this research. The results show that K-Means, with 10 clusters (K = 10), with a DBI value of 1.76, shows moderate dispersion, indicating the potential for improvements for better segmentation precision. In contrast, K-Medoids, with 2 clusters (K = 2) and a lower DBI of 1.48, present a clearer and more compact clustering structure. This implies simplified customer categories, which is beneficial for targeted support. In conclusion, although both methods have strengths and weaknesses, K-Medoids with two clusters emerges as a promising method for Spotify Cares, offering cohesive customer groupings for efficient intervention. Future research efforts could focus on refining parameters and exploring the complex relationships between response time, sentiment analysis, and customer satisfaction to achieve a more nuanced analysis.

Keywords: Customer Support, K-Means Clustering, Twitter, Spotify Cares, Data Analysis